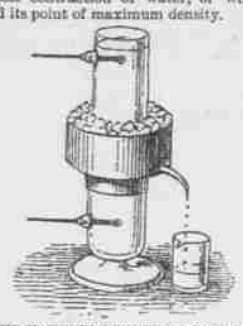
OUR YOUNG FOLKS.

An Entertaining Account of Pearls and Pearl Oysters.

DIVERS WHO RISK THEIR LIVES.

The Author of "Home, Sweet Home"—"There Is a Happy Land"—Antiquity of Electricity—London Parks.

Water presents the phenomenon that when its temperature sinks it contracts up to 4 degs.; but from that point, although the cooling continues, it expands up to the freezing point, so that 4 degs. respresents the point of greatest contraction of water, or what is called its point of maximum density.



THE MAXIMUM DENSITY OF WATER.

Hope used the following method to determine the maximum density of water: He took a deep vessel perforated by two lateral apertures, in which he fixed thermometers (see cut), and having filled the vessel with water at 0 deg., he placed it in a room at a temperature of 15 degs. As the layers of liquid at the sides of the vessel became heated they sank to the bottom, and the lower thermometer marked 4 degs., while that of the upper one was still at zero. Hope then made the inverse experiment; having filled the vessel with water at 15 degs., he placed it in a room at zero. The lower thermometer, having sunk to 4 degs., remained stationary for some time, while the upper one cooled down until it reached zero. Both these experiments prove that water is heavier at 4 degs. than at 0 deg., for in both cases it sinks to the lower part of the vessel. This experiment may be adapted for lecture illustration by using a cylinder containing water of 15 degs. C. partially surrounded by a jacket containing cracked ice, as shown in the cut.

This phenomenon is of great importance in the economy of nature. In winter the temperature of lakes and rivers falls from being in contact with the cold air, and from other causes, such as radiation. The colder water sinks to the bottom and a continual succession of currents is formed, until the whole has a temperature of 4 degs. The cooling on the surface still continues, but the cooled layers, being lighter, remain on the surface and ultimately freeze. The ice formed thus protects the water below, which remains at a temperature of 4 degs., even in the most severe winters, a temperature at which fish and other inhabitants of the water are not destroyed.

Why Sixty Seconds Make a Minute.

Why is our hour divided into sixty minutes, each minute into sixty seconds, etc.? Simply and solely, replies Max Muller in Fortnightly Review, because in Babylon there existed by the side of the decimal system of notation another system, the sexagesimal, which counted by sixties. Why that number should have been chosen is clear enough, and it speaks well for the practical sense of those ancient Babylonian merchants. There is no number which has so many divisors as 60. The Babylonians divided the sun's daily journey into 24 parasangs, or 720 stadia. Each parasang or hour was subdivided into 60 minutes. A parasang is about a German mile, and Babylonian astronomers compared the progress made by the sun during one hour at the time of the equinox to the progress made by a good walker during the same time, both accomplishing one parasang. The whole course of the sun during the 24 equinoctial hours was fixed at 24 parasangs, or 720 stadia, or 360 degrees.

This system was handed on to the Greeks, and Hipparchus, the great Greek philosopher, who lived about 150 B. C., introduced the Babylonian hour into Europe. Ptolemy, who wrote, out 140 A. D., and whose name still lives in that of the Ptolemaic system of astronomy, gave still wider currency to the Babylonian way of reckoning time. It was carried along on the quiet strain of traditional knowledge through the Middle Ages, and, strange to say, it sailed down safely over the [illegible] revolution. For the French, when revolutionizing weights, measures, coins and dates, and subjecting all to the decimal system of reckoning, were induced by some unexplained motive to respect our clocks and watches, and allowed our dials to remain sexagesimal, that is, Babylonian, each hour consisting of sixty minutes.

Lighting Trains by Electricity.

The experiments now being conducted on the trains of the Milwaukee and St. Paul railroad, according to Popular Science News, give substantial evidence that electric lighting of trains is not only possible but practicable. Four main conductors extend the whole length of the train, and the circuit is so arranged that the dynamo, the storage batteries and the lamps may be handled collectively or separately, as occasion requires. The engine is coupled directly to the dynamo, and drives the armature at a speed of 900 revolutions a minute. When the locomotive is detached from the train, the storage batteries are brought into service and the lights are unaffected. Any car or cars may be separated from the train without interfering with the light of either the train or the detached cars, as the storage batteries amply supply all the lamps. By means of switches in the end of each car, the lamps in the middle, at either end, or on either side of the car may be cut out of circuit without affecting the remainder. The couplings between cars are made with cables placed over the doors and under the projecting roofs. The dynamo, engine, switches and resistance coils occupy an apartment about five feet wide in one end of a baggage car, and a storage battery of thirty-two cells is placed under each car.

How a High Chimney Was Overthrown.

The simple and successful plan by which a high chimney was recently overthrown at New Bedford, Mass., is thus described: The chimney, which was 100 feet by 90 feet square, was undermined by knocking out the bricks on the west and north sides, and shored up by planks placed in the apertures. These planks were literally covered with tar and kerosene. When the time arrived for felling the chimney, they were fired. As they became sufficiently burned to cease to support the chimney, the mass settled out of the perpendicular to the north, and then cracked and fell with a crash to the ground.

The Chevalier Gaudet, who, driven penniless from France at the time of the outbreak of the first revolution, made a fortune in London by preparing salads at ten guineas apiece, always appeared the sacred lion in full dress costume, with his sword by his side.

ALL AROUND THE HOUSE.

New and Taking Articles That Adorn Parlor and Boudoir.

Quite novel are "tea cup" brackets. These are intended to be hung sufficiently low on the wall for cups to be placed on the shelf provided. They are rather long and oblong in form; at the top is a shelf for ornaments, with a railed edge; just below this is a panel painted in oils. The cup shelf is fixed at a convenient distance beneath, then the bracket narrows and a small mirror with beveled edge and shelf in front to hold a vase terminates the natty affair.

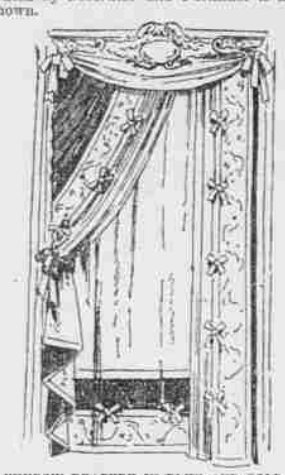
Altogether new and taking is a design for a little work table of white enameled wood. The top is composed of two flaps that open outwards and disclose a firm, square work bag with compartments for scissors, thimble, needlebook, and so on. The outside of the bag is draped with Indian silk finished off with pompons. When the flaps are closed it makes a convenient occasional table, and the top is to be tastefully painted with groups of flowers.

An infinite variety of small articles are now mounted upon easels, so that they will stand upon a table and display themselves easily for inspection. One of the latest fancies is thus to mount a small wooden palette, which is first covered with plush. Into the front of this are screwed a few tiny brass hooks, so disposed as to be convenient for holding old miniatures, ancient seals, medals, or similar curiosities of small size.

Flower pots and large flower bowls for parlor or boudoir are often draped with silk. The pot is placed upon a square or circular piece of silk, which is raised to the top of the flower pot, and there held in place by a gathering thread, carried round, firmly drawn up and fastened off. A pretty cover is made of any colored satin, veiled with lattice work of briers, and where they cross are set miniature roses, so that the whole cover is strewn with soft pink petals.

Tasteful Window Drapery.

Much of the good effect of a room depends upon the taste displayed in the choice and draping of window hangings and portieres. A handsome style of window drapery illustrated by Decorator and Furnisher is here shown.

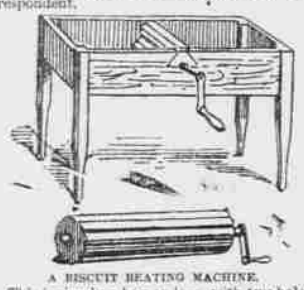


WINDOW DRAPERY IN BLUE AND GOLD.

First curtain in gold silk gauze, decorated with a band of plush in Japanese blue, embroidered in gold and blue. Second curtain, one part of Japanese blue plush, the other of gold gauze; knots of Japanese blue satin. This arrangement, with its exquisite materials and artistic coloring, is extremely regaling. The design, however, may be copied, as to its graceful draping, with charming and equally graceful results in simpler fabrics.

A Culinary Convenience.

The operation of making what are called biscuit in the south, and "beaten biscuit," or "Maryland biscuit," in the north, is greatly facilitated by the use of one of the little biscuit beating machines at come for the purpose. When the ready made article is not to be procured the housewife can have a substitute made by any carpenter with the aid of the following design and dimensions, contributed to Good Housekeeping by a correspondent.



A BISCUIT BEATING MACHINE.

This is simply a box on legs, with two holes midway on both sides for a cylinder to work in. The cylinder is fluted, or grooved, and the handle is detachable, to be fastened to one of the small ends of the cylinder that slips into the holes.

The box or bread trough is two feet long, eight inches deep, and fourteen inches wide. The cylinder should be about fourteen inches long and eight or nine inches in circumference.

In using it, you mix the dough in a tray bowl, then put it in the dough trough at A, turn the crank C with the right hand, and push the dough toward the grooved cylinder with the other. The dough will pass under the cylinder, or roller, D, to B; then reverse the crank, and the dough will return to A. Continue this operation until the dough is light, satiny, smooth to the touch, and will peel in thin flakes.

Candied Fruits.

Make a thick sirup with a teacupful of water to a pound of sugar, and in this boil peaches, pears, plums, apricots, cherries or other fruit until tender—no longer. Let the fruit remain two days in the sirup, then drain it out, sprinkle sugar over each piece and dry in the sun or a moderately warm oven.

Spanish Cream.

Beat the yolks of three eggs with half a cupful of powdered sugar; heat half an ounce of isinglass with a quart and a half of milk; let it come to a boil and stir it slowly into the yolks; allow it to boil up again and stir in the beaten whites of the eggs, pour into molds and let it cool.

Peach Pudding.

Fill the pudding dish with alternate layers of crumbs, dotted with butter, and sliced and sweetened peaches, having crumbs on top, pour over custard made of one pint of milk, the yolks of two eggs, and two tablespoonfuls of sugar. Steam, and serve with any good sauce.

Cup Cake.

One cup of butter, two cups of sugar, three cups of flour, four eggs, two-thirds of a cup of milk and one teaspoonful of baking powder.

Grape Fruit Sherbet.

Use the strained juice of the fruit, mixed with an equal quantity of sirup made from white sugar; freeze it like any water ice.

A hale old man, Mr. James Wilson of Allens Springs, Ill., who is over sixty years of age, says: "I have in my time tried a great many medicines, some of excellent quality, but never before did I find any that would so completely do all that is claimed for it as Chamberlain's Colic, Cholera and Diarrhoea Remedy. It is truly a wonderful medicine." For sale by Z. C. M. I. Drug Department.

Facts Worth Knowing.

In all diseases of the nasal mucous membrane the remedy used must be non-irritating. The medical profession has been slow to learn this. Nothing satisfactory can be accomplished with douches, snuffs, powders, syringes, astringents or any similar applications, because they are all irritating, do not thoroughly reach the affected surfaces and should be abandoned as worse than failures. A multitude of persons who had for years borne all the worry and pain that catarrh can inflict testify to radical and permanent cures wrought by Ely's Cream Balm.